

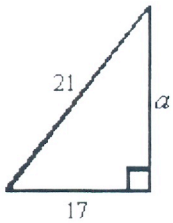
GEOMETRY FINAL REVIEW PART B

Name: _____

12-13

ID: A

54. Find the length of the leg of this right triangle. Give an approximation to 3 decimal places.



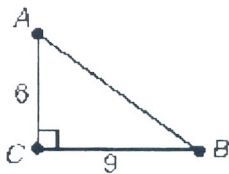
$$\begin{aligned} c^2 &= a^2 + b^2 \\ 21^2 &= a^2 + 17^2 \\ 441 &= a^2 + 289 \\ -289 & \quad -289 \\ \hline a^2 &= 152 \end{aligned}$$

$$a = \sqrt{152}$$

$$a = 12.329$$

- a. 12.329 b. 11.916 c. 12.650 d. 27.019

55. $\triangle ABC$ is a right triangle. $AB =$ _____.



$$c^2 = a^2 + b^2$$

$$c^2 = 6^2 + 9^2$$

$$c^2 = 36 + 81$$

$$c^2 = 117$$

$$c = \sqrt{117}$$

$$c = \sqrt{117}$$

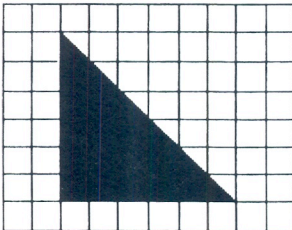
$$c = \sqrt{9 \cdot 13}$$

$$c = 3\sqrt{13}$$

- a. $3\sqrt{13}$ b. $3\sqrt{6}$ c. $3\sqrt{5}$ d. 117

Estimate the area of the polygon.

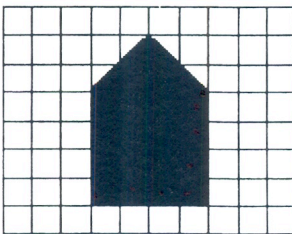
56.



$$\frac{1}{2}(6 \times 6) = 18$$

- a. 25 units² b. 21 units² c. 18 units² d. 15 units²

57.



$$16 + \frac{1}{2}(4)(2)$$

$$16 + 4$$

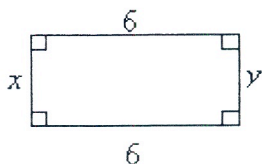
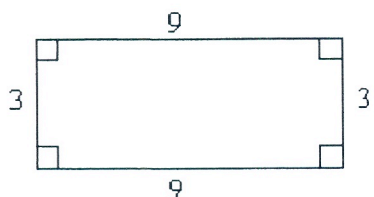
- a. 16 units² b. 32 units² c. 24 units² d. 20 units²



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58. The polygons below are similar, but not necessarily drawn to scale. Find the values of x and y .



$$\frac{3}{x} = \frac{9}{6}$$

$$18 = 9x$$

$$\frac{18}{9} = \frac{9}{9}$$

$$x = 2$$

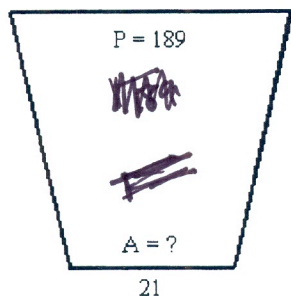
$$\frac{3}{y} = \frac{9}{6}$$

$$18 = 9y$$

$$\frac{18}{9} = \frac{9}{9}$$

$$y = 2$$

59. The figures are similar. Find the missing values.



Perimeter

$$\frac{21}{8} = \frac{189}{x}$$

$$21x = 1512$$

$$x = 72$$

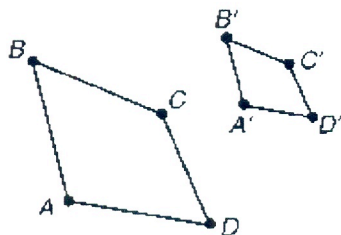
Area

$$\frac{21^2}{8^2} = \frac{x}{320}$$

$$\frac{14120}{64} = \frac{64x}{64}$$

$$x = 2205$$

60. Quadrilaterals $ABCD$ and $A'B'C'D'$ are similar with $\frac{AB}{A'B'} = \frac{5}{2}$. If the area of $ABCD$ is 115 square units, what is the area of $A'B'C'D'$?



$$\frac{25}{2} = \frac{115}{x}$$

$$230 = 25x$$

$$\frac{230}{25} = \frac{25x}{25}$$

$$x = 9.2$$

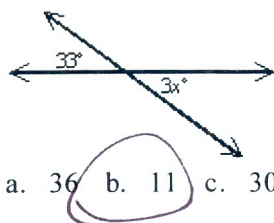
$$\frac{25}{2} = \frac{115}{x}$$

$$\frac{25x}{25} = \frac{230}{25}$$

$$x = 9.2 \text{ units}$$

Find the value of x in the figure.

- 61.



- a. 36 b. 11 c. 30 d. 10

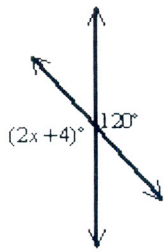
$$\frac{33}{3} = \frac{3x}{3}$$

$$x = 11$$

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62.

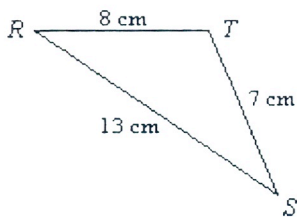


$$\begin{array}{r} 2x + 4 = 120 \\ -4 \quad -4 \\ \hline 2x = 116 \\ \frac{2x}{2} = \frac{116}{2} \\ x = 58 \end{array}$$

- a. 62 b. 124 c. 120 d. 58

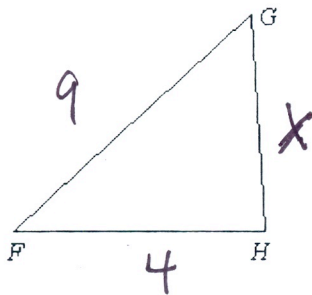
List the angles in order from least to greatest measure.

63.



$\angle R, \angle S, \angle T$

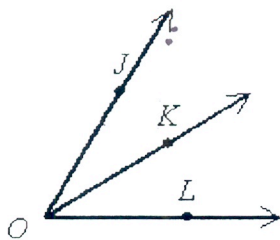
- a. $\angle T, \angle S, \angle R$ b. $\angle S, \angle T, \angle R$ c. $\angle S, \angle R, \angle T$ d. $\angle R, \angle S, \angle T$



$$5 < x < 13$$

64. Determine the range of possible values for x if $HF = 4$, $GH = x$, and $GF = 9$.
a. $9 < x < 4$ b. $4 < x < 9$ c. $13 < x < 5$ d. $5 < x < 13$

65. If $m\angle JOK = 28^\circ$ and $m\angle JOL = 58^\circ$, then what is the measure of $\angle KOL$?

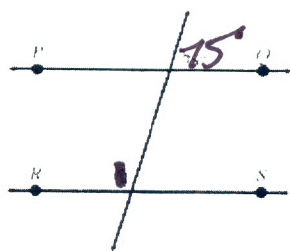


$$58 - 28 = 30^\circ$$

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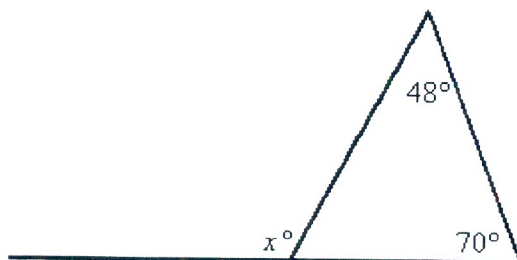
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66. Find $m\angle 1$ in the figure below. \overleftrightarrow{PQ} and \overleftrightarrow{RS} are parallel.



$$180 - 75 = 105$$

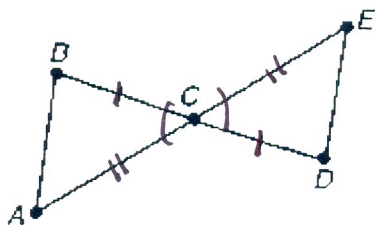
- a. 105° b. 75° c. 115° d. 15°
67. Find the value of x .



$$x = 48 + 70$$

$$x = 118$$

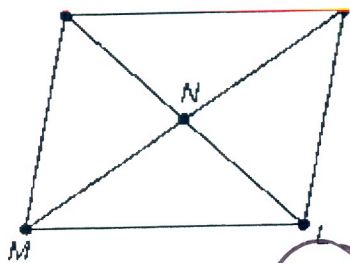
68. What must be true in order for $\triangle ABC \cong \triangle EDC$ by the SAS Congruence Postulate?



- a. $\angle B \cong \angle D$ b. $\angle A \cong \angle E$ c. $\overline{AC} \cong \overline{CE}$ d. $\overline{AB} \cong \overline{DE}$

69. The sum of the measures of the interior angles of a convex quadrilateral is ____.
- a. 180° b. 270° c. 360° d. 540°

$$(n-2)(180) = (4-2)(180) = 360$$



- a. $m\angle PQM$ b. 83° c. 97° d. $m\angle QLM$

71. Choose the statement that is NOT ALWAYS true.

For any parallelogram _____.

- a. the diagonals bisect each other b. opposite angles are congruent c. the diagonals are perpendicular
d. opposite sides are congruent